HTML5

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HTML

- Hypertext Markup language
- The standard markup language for Web pages.
- Version: 4,5

Frist project

A Simple HTML Document

```
<!DOCTYPE html>
<html>
  <head>
    <title>Page Title</title>
  </head>
  <body>

    <h1>My First Heading</h1>
    <p>My first paragraph.</p>

  </body>
</html>
```

Example Explained

The <!DOCTYPE html> declaration defines that this document is an HTML5 document

The <html> element is the root element of an HTML page

The <head> element contains meta information about the HTML page

The <title> element specifies a title for the HTML page (which is shown in the browser's title bar or in the page's tab)

The <body> element defines the document's body, and is a container for all the visible contents, such as headings, paragraphs, images, hyperlinks, tables, lists, etc.

The <h1> element defines a large heading

**The ** element defines a paragraph

What is an HTML Element?

An HTML element is defined by a start tag, some content, and an end tag:

Start tag	Element content	End tag
<h1>	My First Heading	</h1>
	My first paragraph.	

The Head

```
<html>
  <head>
    <meta charset="UTF-8">
    <title>page title</title>
    <meta name="description" content="This Is Our page" />
    <style></style>
    <script></script>
    <link rel="stylesheet" href="">
    <script src=""></script>
  </head>
  <body>
    This Is page
  </body>
</html>
```

The HTML **<head>** element is a container for the following elements: **<title>, <style>, <meta>, <link>, <script>,** and **<base>.**

The **<title>** element defines the title of the document. The title must be text-only, and it is shown in the browser's title bar or in the page's tab.
The **<title>** element is required in HTML documents!
The contents of a page title is very important for search engine optimization (SEO)! The page title is used by search engine algorithms to decide the order when listing pages in search results.

The **<title>** element:

- defines a title in the browser toolbar
- provides a title for the page when it is added to favorites
- displays a title for the page in search engine-results

The **<style>** element is used to define style information for a single HTML page:

The **<link>** element defines the relationship between the current document and an external resource.
The **<link>** tag is most often used to link to external style sheets:

The **<meta>** element is typically used to specify the character set, page description, keywords, author of the document, and viewport settings.
The metadata will not be displayed on the page but are used by browsers (how to display content or reload page), by search engines (keywords), and other web services.

```
Define the character set used:
<meta charset="UTF-8">
Define keywords for search engines:
<meta name="keywords" content="HTML, CSS, JavaScript">
Define a description of your web page:
<meta name="description" content="Free Web tutorials">
Define the author of a page:
<meta name="author" content="John Doe">
Refresh document every 30 seconds:
<meta http-equiv="refresh" content="30">
Setting the viewport to make your website look good on all devices:
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

The **<script>** element is used to define client-side JavaScripts.

The **<base>** element specifies the base URL and/or target for all relative URLs in a page.
The **<base>** tag must have either an href or a target attribute present, or both.
There can only be one single **<base>** element in a document!

Comments

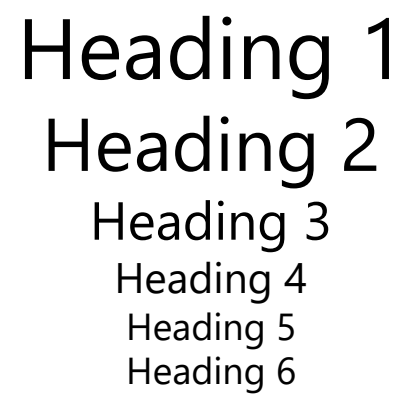
```
<html>
  <head>
    <meta charset="UTF-8">
    <title>page title</title>
    <meta name="description" content="This Is Our page" />
    <style></style>
    <script></script>
    <link rel="stylesheet" href="">
    <script src=""></script>
  </head>
  <body>
    <!-- this is a comment -->
    <!-- this is a header -->
    <h1>Welcome to page</h1>

    <!-- this is a paragraph -->
    <p>this is a paragraph</p>

  </body>
</html>
```

Headings

HTML headings are defined with the <h1> to <h6> tags.

<h1> defines the most important heading. <h6> defines the least important heading.

```
  </head>
  <body>
    <h1>Heading 1</h1>
    <h2>Heading 2</h2>
    <h3>Heading 3</h3>
    <h4>Heading 4</h4>
    <h5>Heading 5</h5>
    <h6>Heading 6</h6>
  </body>
</html>
```



Headings Are Important

- Search engines use the headings to index the structure and content of your web pages.
- Users often skim a page by its headings. It is important to use headings to show the document structure.
- <h1> headings should be used for main headings, followed by <h2> headings, then the less important <h3>, and so on.

Paragraphs

- The HTML **<p>** element defines a paragraph.
- A paragraph always starts on a new line, and browsers automatically add some white space (a margin) before and after a paragraph.

```
  </head>
  <body>
    <p>This is a paragraph.</p>
    <p>This is another paragraph.</p>
  </body>
</html>
```

This is a paragraph.

This is another paragraph.

- you cannot change the display by adding extra spaces or extra lines in your HTML code.
- The browser will automatically remove any extra spaces and lines when the page is displayed:

```
    <p>
      This paragraph
      contains a lot of lines
      in the source code,
      but the browser
      ignores it.
    </p>

    <p>
      This paragraph
      contains         a lot of spaces
      in the source          code,
      but the        browser
      ignores it.
    </p>
  </body>
</html>
```

This paragraph contains a lot of lines in the source code, but the browser ignores it.

This paragraph contains a lot of spaces in the source code, but the browser ignores it.

Attributes

- All HTML elements can have **attributes**
- Attributes provide **additional information** about elements
- Attributes are always specified in **the start tag**
- Attributes usually come in img pairs like src=”value”

```
  </head>
  <body>
    <img src="" alt="" srcset="">
    <a href=""></a>
    </p>
  </body>
</html>
```

Global Attributes

- The global attributes are attributes that can be used with all HTML elements like class

```
  <body>
    <h1 class="intro">Header 1</h1>
    <p class="important">Note that this is an important paragraph. :)</p>
    </p>
  </body>
</html>
```

Formatting elements

b => **Bold**
strong => **Bold(Important Text)**
I => *Italic*
em => *Emphasized*
mark => Marked Text Or Highlighted Text
u => Underline
small => Smaller text
del => ~~Deleted Text~~
ins => Inserted Text
sub => Subscript
sup => Superscript

```
<p> this is a <b>paragraph</b> </p>
<p> this is a <strong>important paragraph</strong> </p>
<p> this is a <i>7kma</i> </p>
<p> this is a <em>important 7kma</em> </p>
<p> this is a <mark>paragraph</mark> </p>
<p> this is a <u>paragraph</u> </p>
<p> this is a <del>paragraph</del> </p>
<p> this is a salle <del>100$</del> 40$</p>
<p> this is a salle <del>100$</del> <ins>40$</ins> </p>
<p> this is a h<sub>2</sub>o </p>
<p> this is a 2<sup>3</sup></p>


</body>
</html>
```

this is a **paragraph**

this is a **important paragraph**

this is a *7kma*

this is a *important 7kma*

this is a paragraph

this is a paragraph

this is a ~~paragraph~~

this is a salle ~~100$~~ 40$

this is a salle ~~100$~~ 40$

this is a h_2o

this is a 2^3

Links - Hyperlinks

- HTML links are hyperlinks.
- You can click on a link and jump to another document.
- When you move the mouse over a link, the mouse arrow will turn into a little hand.

```
<body>
<a href="https://www.google.com/">google</a>
<a href="https://www.google.com/" target="_blank">google</a>
<a href="https://www.google.com/" title="go to google">google</a>
<a href="home.html">home</a>
<a href="mailto:mail@mail.com">mail</a>
<a href="#p">paragraph</a>
<p>Lorem ipsum dolor sit amet, consectetur adipisicing elit. Accusamus accusantium adipisci at dignissimos ea
<p>Lorem ipsum dolor sit amet, consectetur adipisicing elit. Accusamus accusantium adipisci at dignissimos ea
<p>Lorem ipsum dolor sit amet, consectetur adipisicing elit. Accusamus accusantium adipisci at dignissimos ea
<p>Lorem ipsum dolor sit amet, consectetur adipisicing elit. Accusamus accusantium adipisci at dignissimos ea
<p id="p">Lorem ipsum dolor sit amet, consectetur adipisicing elit. Accusamus accusantium adipisci at digniss
<p>Lorem ipsum dolor sit amet, consectetur adipisicing elit. Accusamus accusantium adipisci at dignissimos ea
```

- _blank - Opens the document in a new window or tab
- title attribute specifies extra information about an element. The information is most often shown as a tooltip text when the mouse moves over the element.
- Link to a page located in the html folder on the current web site
- mailto: inside the href attribute to create a link that opens the user's email program (to let them send a new email)

Images

- src - Specifies the path to the image
- alt - Specifies an alternate text for the image

```
<body>
    <img src="https://www.imgworlds.com/wp-content/uploads/2015/12/18-CONTACTUS-HEADER.jpg" alt="gambol image">
    <img src="imgs/gambol.jpg" alt="gambol">
    <img src="../gambol.jpg" alt="gambol">
    <img src="imgs/gambol.jpg" alt="gambol" width="200px" height="100px">
</body>
</html>
```

Lists

HTML lists allow web developers to group a set of related items in lists.

ul => Unorderd List
li => List Item
ol => Ordered List
dl => Description List
dt => Term
dd => Description Term

Unordered List:

```
<ul>
    <li>html</li>
    <li>css</li>
    <li>js</li>
    <li>php</li>
    <li>mysql</li>
</ul>
```

this is a unordered list

- html
- css
- js
- php
- mysql

Ordered List:

```
<ol>
    <li>one</li>
    <li>two</li>
    <li>three</li>
    <li>four</li>
    <li>five</li>
</ol>
```

this is a ordered list

1. one
2. two
3. three
4. four
5. five

Separator:

```
    <p>this is a reverse list</p>
    <ol reversed>
        <li>one</li>
        <li>two</li>
        <li>three</li>
        <li>four</li>
        <li>five</li>
    </ol>
    <p> start list from 11</p>
    <ol start="11">
        <li>one</li>
        <li>two</li>
        <li>three</li>
        <li>four</li>
        <li>five</li>
    </ol>
    <p>this is a type list</p>
    <ol type="I">
        <li>one</li>
        <li>two</li>
        <li>three</li>
        <li>four</li>
        <li>five</li>
    </ol>
```

this is a reverse list

5. one
4. two
3. three
2. four
1. five

start list from 11

11. one
12. two
13. three
14. four
15. five

this is a type list

I. one
II. two
III. three
IV. four
V. five

Description List:

```
<dl>
    <dt>term</dt>
    <dd>description of term</dd>
    <dt>html</dt>
    <dd>HyperText markup langauge</dd>
    <dt>css</dt>
    <dd>CSS is the language we use to style an HTML document</dd>
    <dt>js</dt>
    <dd>JavaScript is the world's most popular programming language</dd>

</dl>
```

term

description of term

html

HyperText markup langauge

css

CSS is the language we use to style an HTML document

js

JavaScript is the world's most popular programming language

Tables

HTML tables allow web developers to arrange data into rows and columns.

- The **<table>** tag defines an HTML table.
- Each table row is defined with a **<tr>** tag. Each table header is defined with a **<th>** tag. Each table data/cell is defined with a **<td>** tag.
- By default, the text in **<th>** elements are bold and centered.
- By default, the text in **<td>** elements are regular and left-aligned.

```
<table>


        <tr>
            <th>frist name</th>
            <th>last name</th>
            <th>email</th>
            <th>password</th>
        </tr>
        <tr>
            <td>ahmed</td>
            <td>ezz</td>
            <td>ahmed@gmail.com</td>
            <td>ahmedklsdmjk</td>
        </tr>
        <tr>
            <td>mona</td>
            <td>rashwon</td>
            <td>monars@gmail.com</td>
            <td>kamsklm</td>
        </tr>

</table>
```

```html
<table>
    <thead>
        <tr>
            <th>frist name</th>
            <th>last name</th>
            <th>email</th>
            <th>password</th>
        </tr>
    </thead>
    <tbody>
        <tr>
            <td>mohammed</td>
            <td>mostafa</td>
            <td>mohammed@gmail.com</td>
            <td>mohammed123321</td>
        </tr>
        <tr>
            <td>mohammed</td>
            <td>mostafa</td>
            <td>mohammed@gmail.com</td>
            <td>mohammed123321</td>
        </tr>
    </tbody>
    <tfoot>
        <tr>
            <td>one colm</td>
            <td>two colm</td>
            <td>three colm</td>
            <td>four colm</td>
        </tr>
    </tfoot>
</table>
```

=

```html
<table>
  <tfoot>
      <tr>
          <td>one colm</td>
          <td>two colm</td>
          <td>three colm</td>
          <td>four colm</td>
      </tr>
    </tfoot>
    <thead>
        <tr>
            <th>frist name</th>
            <th>last name</th>
            <th>email</th>
            <th>password</th>
        </tr>
    </thead>
    <tbody>
        <tr>
            <td>mohammed</td>
            <td>mostafa</td>
            <td>mohammed@gmail.com</td>
            <td>mohammed123321</td>
        </tr>
        <tr>
            <td>mohammed</td>
            <td>mostafa</td>
            <td>mohammed@gmail.com</td>
            <td>mohammed123321</td>

    </tbody>

</table>
```

frist name	last name	email	password
mohammed	mostafa	mohammed@gmail.com	mohammed12332
mohammed	mostafa	mohammed@gmail.com	mohammed12332
one colm	two colm	three colm	four colm

- Tag <caption>
- colspan

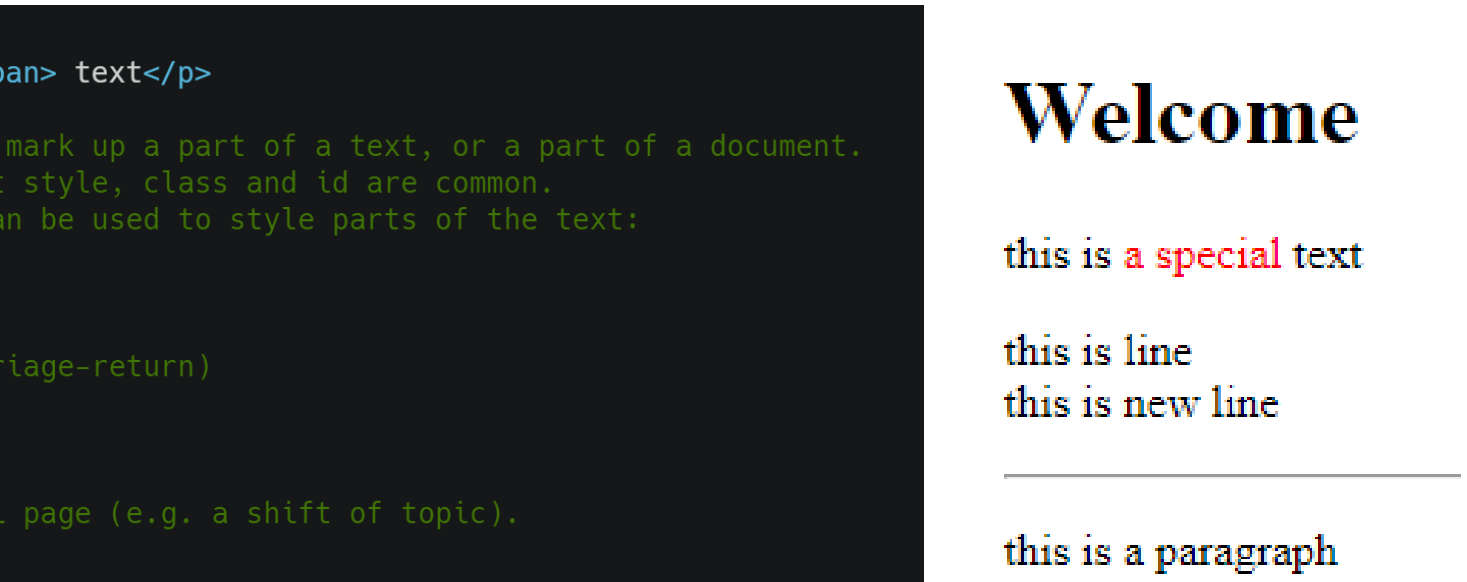
```html
<table border="1">
    <caption>info users</caption>
        <tr >
            <th>frist name</th>
            <th>last name</th>
            <th>email</th>
            <th>password</th>
        </tr>
        <tr>
            <td>mohammed</td>
            <td>mostafa</td>
            <td>mohammed@gmail.com</td>
            <td>mohammed123321</td>
        </tr>
        <tr>
            <td>mohammed</td>
            <td>mostafa</td>
            <td>mohammed@gmail.com</td>
            <td>mohammed123321</td>
        </tr>
        <tr>
            <td colspan="4">end users</td>
        </tr>

</table>
```

info users

frist name	last name	email	password
mohammed	mostafa	mohammed@gmail.com	mohammed123321
mohammed	mostafa	mohammed@gmail.com	mohammed123321
end users			

Span & br & hr

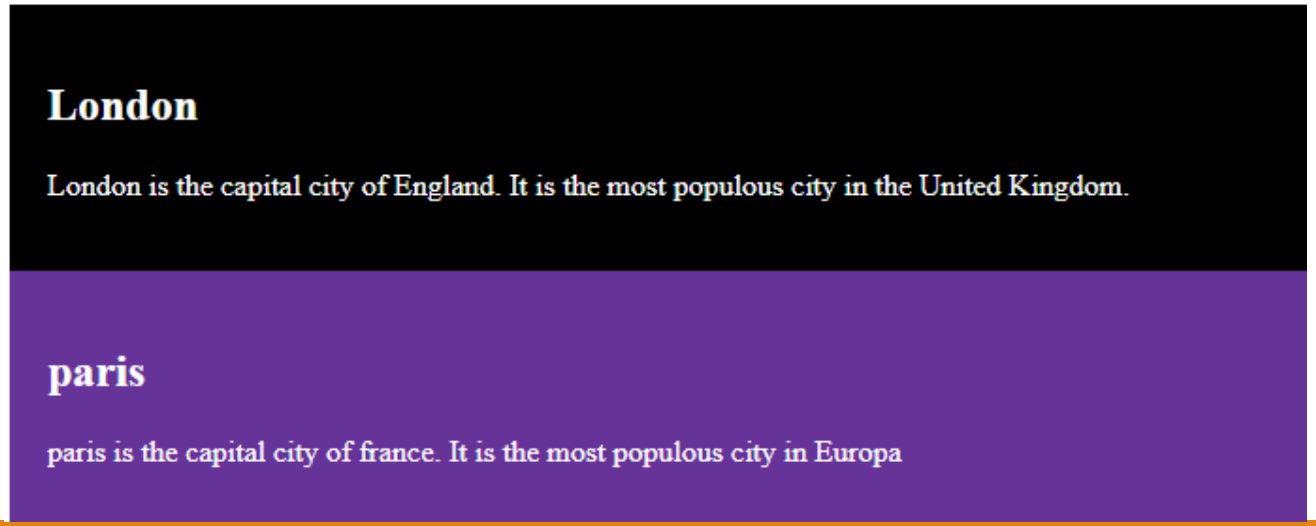
```
<h1>Welcome</h1>
<p>this is <span style="color: red;">a special</span> text</p>
<!--
The <span> element is an inline container used to mark up a part of a text, or a part of a document.
The <span> element has no required attributes, but style, class and id are common.
When used together with CSS, the <span> element can be used to style parts of the text:
  -->
<p>this is line <br> this is new line</p>
  <!--
  <br> element produces a line break in text (carriage-return)
  -->
<hr>
  <!--
  The <hr> tag defines a thematic break in an HTML page (e.g. a shift of topic).
  -->
<p>this is a paragraph</p>
```



Div

- The ** ** tag defines a division or a section in an HTML document.
- The ** ** tag is used as a container for HTML elements - which is then styled with CSS or manipulated with JavaScript.
- The ** ** tag is easily styled by using the class or id attribute.
- Any sort of content can be put inside the ** ** tag!

```
<div style="background-color:black;color:white;padding:20px;">
    <h2>London</h2>
    <p>London is the capital city of England. It is the most populous city in the United Kingdom.</p>
</div>
<div style="background-color:rebeccapurple;color:white;padding:20px;">
    <h2>paris</h2>
    <p>paris is the capital city of france. It is the most populous city in Europa</p>
</div>
```



Layout with Div And Classes

```
<div class="header">
    <h2>LOGO</h2>
    <ul>
        <li>Home</li>
        <li>services</li>
        <li>about us</li>
        <li>contact us</li>
    </ul>
</div>
<hr>
<div class="navigation">
    <a href="#">HTML</a> |
    <a href="#">CSS</a> |
    <a href="#">JavaScript</a> |
    <a href="#">Python</a>
</div>
<hr>
<div class="content">
    content
</div>
<hr>
<div class="sidebar">
    sidebar
</div>
<hr>
<div class="footer">
    footer
</div>
```

Entities

- To use the less than (<) or greater than (>) signs in your text, the browser might mix them with tags.
- Character entities are used to display reserved characters in HTML.

Result	Description	Entity Name	Entity Number
<	less than	<	<
>	greater than	>	>
&	ampersand	&	&
"	double quotation mark	"	"
'	single quotation mark (apostrophe)	'	'
¢	cent	¢	¢
£	pound	£	£
¥	yen	¥	¥
€	euro	€	€
©	copyright	©	©
®	registered trademark	®	®

Ex:

```
<p> this is a paragraph ,we use &lt; p &gt; </p>
<p>this is a web site copyright &copy; for me </p>
```

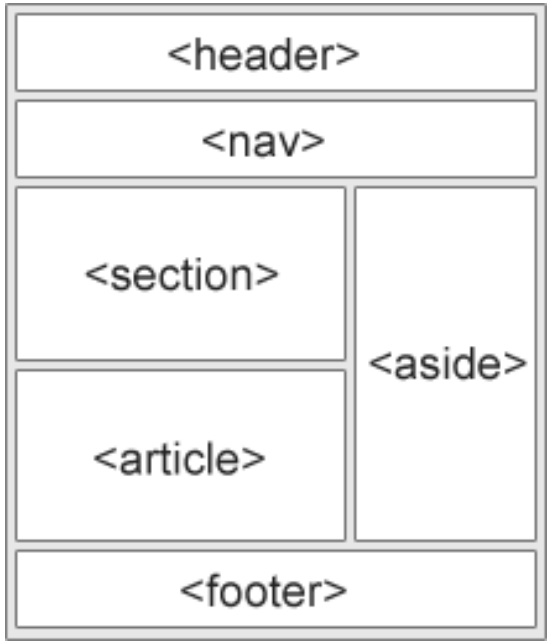
this is a paragraph ,we use < p >

this is a web site copyright © for me

Semantic elements

- A semantic element clearly describes its meaning to both the browser and the developer.
- Examples of non-semantic elements: and - Tells nothing about its content.
- Examples of semantic elements: <form>, <table>, and <article> - Clearly defines its content.
- We can consider it as a div, but with an expressive name

Tag	Description
<article>	Defines independent, self-contained content
<aside>	Defines content aside from the page content
<details>	Defines additional details that the user can view or hide
<figcaption>	Defines a caption for a <figure> element
<figure>	Specifies self-contained content, like illustrations, diagrams, photos, code listings, etc.
<footer>	Defines a footer for a document or section
<header>	Specifies a header for a document or section
<main>	Specifies the main content of a document
<mark>	Defines marked/highlighted text
<nav>	Defines navigation links
<section>	Defines a section in a document
<summary>	Defines a visible heading for a <details> element
<time>	Defines a date/time



Layout with semantic elements

```
<header>
    <h2>LOGO</h2>
    <ul>
        <li>Home</li>
        <li>services</li>
        <li>about us</li>
        <li>contact us</li>
    </ul>
</header>
<hr>
<nav>
    <a href="#">HTML</a> |
    <a href="#">CSS</a> |
    <a href="#">JavaScript</a> |
    <a href="#">Python</a>
</nav>
<hr>
<section>
    <figure>
        <img src="imgs/gambol.jpg" alt="img" >
        <figcaption>img</figcaption>
    </figure>
</section>
<article>
    content article
</article>
<hr>
<aside>
    sidebar
</aside>
<hr>
<footer>
    footer
</footer>
```

LOGO

- Home
- services
- about us
- contact us

HTML | CSS | JavaScript | Python

img

content article

---

sidebar

---

footer

Audio

The HTML **<audio>** element is used to play an audio file on a web page.

The **controls** attribute adds audio controls, like play, pause, and volume.

```
<h1>Audio</h1>
<audio src="song.mp3" type="audio/mp3" controls ></audio>
```

The **<source>** element allows you to specify alternative audio files which the browser may choose from. The browser will use the first recognized format.

```
<audio controls>
  <source src="song.mp3" type="audio/mpeg">
  <source src="song.ogg" type="audio/ogg">
</audio>
```

To start an audio file automatically, use the **autoplay** attribute

```
<audio controls autoplay>
  <source src="song.mp3" type="audio/mpeg">
  <source src="song.ogg" type="audio/ogg">
</audio>
```

The text between the <audio> and </audio> tags will only be displayed in browsers that do not support the <audio> element.

```
<h1>Audio</h1>
<audio controls>
  <source src="song.mp3" type="audio/mpeg">
  <source src="song.ogg" type="audio/ogg">
  Your browser does not support the audio element.
</audio>
```

To muted an audio file automatically, use the **muted** attribute

```
<audio controls muted>
  <source src="song.mp3" type="audio/mpeg">
  <source src="song.ogg" type="audio/ogg">
  Your browser does not support the audio element.
</audio>
```

use the **loop** attribute : A song that will start over again, every time it is finished:

```
<audio controls loop>
  <source src="song.mp3" type="audio/mpeg">
  <source src="song.ogg" type="audio/ogg">
  Your browser does not support the audio element.
</audio>
```

Video

The HTML **<video>** element is used to show a video on a web page.
The **controls** attribute adds video controls, like play, pause, and volume.

```
<h1>video</h1>
<video src="film.mp4" type="video/mp4" controls></video>
```

The **<source>** element allows you to specify alternative video files which the browser may choose from. The browser will use the first recognized format.

```
<video controls >
  <source src="film.mp4" type="video/mp4">
  <source src="film.ogg" type="video/ogg">
</video>
```

To start video file automatically, use the **autoplay** attribute

```
<video controls autoplay >
  <source src="film.mp4" type="video/mp4">
  <source src="film.ogg" type="video/ogg">
</video>
```

File Format	Media Type
MP4	video/mp4
WebM	video/webm
Ogg	video/ogg

The text between the **<video>** and **<video>** tags will only be displayed in browsers that do not support the **<video>** element.

```
<video controls >
  <source src="film.mp4" type="video/mp4">
  <source src="film.ogg" type="video/ogg">
  Your browser does not support the video tag.
</video>
```

To muted video file automatically, use the **muted** attribute

```
<video controls muted >
  <source src="film.mp4" type="video/mp4">
  <source src="film.ogg" type="video/ogg">
  Your browser does not support the video tag.
</video>
```

use the **loop** attribute : A video that will start over again, every time it is finished:

```
<video controls loop >
  <source src="film.mp4" type="video/mp4">
  <source src="film.ogg" type="video/ogg">
  Your browser does not support the video tag.
</video>
```

The **poster** attribute specifies an image to be shown while the video is downloading, or until the user hits the play button.

```
<video controls poster="imgs/gambol.jpg">
  <source src="film.mp4" type="video/mp4">
  <source src="film.ogg" type="video/ogg">
  Your browser does not support the video tag.
</video>
```

Width & height in video

```
<video controls width="600" height="400" >
  <source src="film.mp4" type="video/mp4">
  <source src="film.ogg" type="video/ogg">
</video>
```

The **<track>** tag specifies text tracks for <audio> or <video> elements.
This element is used to specify subtitles, caption files or other files containing text, that should be visible when the media is playing.
Tracks are formatted in WebVTT format (.vtt files).

```
<video controls>
  <source src="film.mp4" type="video/mp4">
  <source src="film.ogg" type="video/ogg">
  <track src="fgsubtitles_en.vtt" kind="subtitles" srclang="en" label="English">
  <track src="fgsubtitles_ar.vtt" kind="subtitles" srclang="Arabic" label="Arabic">
</video>
```

Form

The HTML **<form>** element is used to create an HTML form for user input
The <form> element is a container for different types of input elements, such as: text fields, checkboxes, radio buttons, submit buttons, etc.

```
<form>
.
form elements
.
</form>
```

Input Types And Label

The HTML **<input>** element is the most used form element.
An **<input>** element can be displayed in many ways, depending on the type attribute.

```
<form>
  <input type="email"><br>
  <input type="password" >
  <input type="submit" >
</form>
```

Type	Description
<input type="text">	Displays a single-line text input field
<input type="radio">	Displays a radio button (for selecting one of many choices)
<input type="checkbox">	Displays a checkbox (for selecting zero or more of many choices)
<input type="submit">	Displays a submit button (for submitting the form)
<input type="button">	Displays a clickable button

The different input types are covered in: https://www.w3schools.com/html/html_form_input_types.asp

The **<label>** tag defines a label for many form elements.
The **<label>** element is useful for screen-reader users, because the screen-reader will read out loud the label when the user focus on the input element.
The **<label>** element also help users who have difficulty clicking on very small regions (such as radio buttons or checkboxes) - because when the user clicks the text within the **<label>** element, it toggles the radio button/checkbox.
The for attribute of the **<label>** tag should be equal to the id attribute of the **<input>** element to bind them together.

```
<form>
  <label>email</label><br>
  <input type="email"><br>
  <label>password</label><br>
  <input type="password" >
  <input type="submit" >
</form>
```

The **for** attribute of the **<label>** tag should be equal to the id attribute of the **<input>** element to bind them together.

```
<form>
  <label for="email">email</label><br>
  <input type="email"><br>
  <label for="password">password</label><br>
  <input type="password" >
  <input type="submit" >
</form>
```

Required, Placeholder, Value

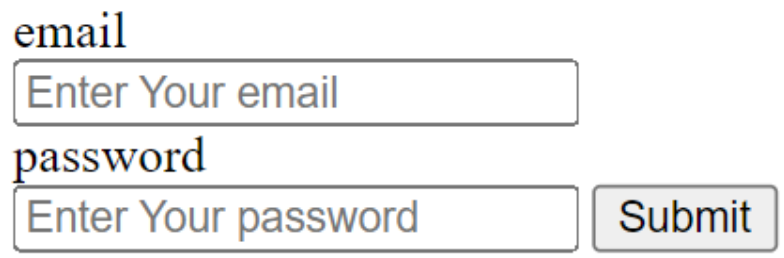
The **required** attribute specifies that an input field must be filled out before submitting the form.

```
<input required>
```

```
<form>
  <label>email</label><br>
  <input type="email"><br>
  <label>password</label><br>
  <input type="password" required >
  <input type="submit" >
</form>
```

The **placeholder** attribute specifies a short hint that describes the expected value of an input field (e.g., a sample value or a short description of the expected format).
The short hint is displayed in the input field before the user enters a value.

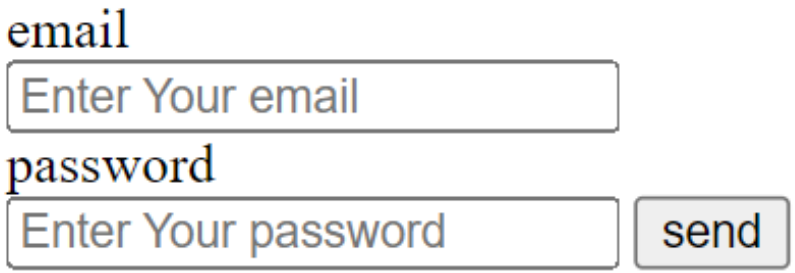
```
<form>
    <label>email</label><br>
    <input type="email" placeholder="Enter Your email"><br>
    <label>password</label><br>
    <input type="password" placeholder="Enter Your password">
    <input type="submit" >
</form>
```



value

The **value** attribute specifies the value of an <input> element.
The **value** attribute is used differently for different input types:

```
<form>
    <label>email</label><br>
    <input type="email" placeholder="Enter Your email"><br>
    <label>password</label><br>
    <input type="password" placeholder="Enter Your password">
    <input type="submit" value="submit">
</form>
```



Action

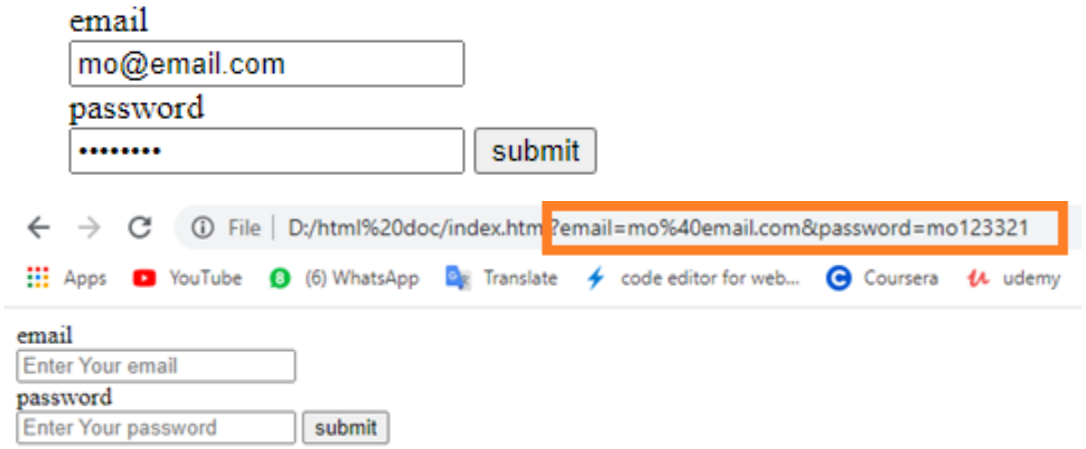
The **action** attribute specifies where to send the form-data when a form is submitted.

```
<form action="send.php">
    <label>email</label><br>
    <input type="email" placeholder="Enter Your email"><br>
    <label>password</label><br>
    <input type="password" placeholder="Enter Your password">
    <input type="submit" value="submit">
</form>
```

Name, Method

The **name** attribute specifies the name of an **<input>** element.
The **name** attribute is used to reference elements in a JavaScript, or to reference form data after a form is submitted.

```
<form action="">
    <label>email</label><br>
    <input type="email" placeholder="Enter Your email" name="email"><br>
    <label>password</label><br>
    <input type="password" placeholder="Enter Your password" name="password">
    <input type="submit" value="submit">
</form>
```



The **method** attribute specifies how to send form-data (the form-data is sent to the page specified in the action attribute).
The form-data can be sent as URL variables (with method="get") or as HTTP post transaction (with method="post").

```
<form method="get or post">
```

```
<form action="send.php" method="post">
    <label>email</label><br>
    <input type="email" placeholder="Enter Your email" name="email"><br>
    <label>password</label><br>
    <input type="password" placeholder="Enter Your password" name="password">
    <input type="submit" value="submit">
</form>
```

Get	Default. Appends the form-data to the URL in name/value pairs: URL?name=value&name=value
Post	Sends the form-data as an HTTP post transaction

Hidden

The **<input type="hidden">** defines a hidden input field.
A hidden field let web developers include data that cannot be seen or modified by users when a form is submitted.
A hidden field often stores what database record that needs to be updated when the form is submitted.
Note: While the value is not displayed to the user in the page's content, it is visible (and can be edited) using any browser's developer tools or "View Source" functionality. Do not use hidden inputs as a form of security!

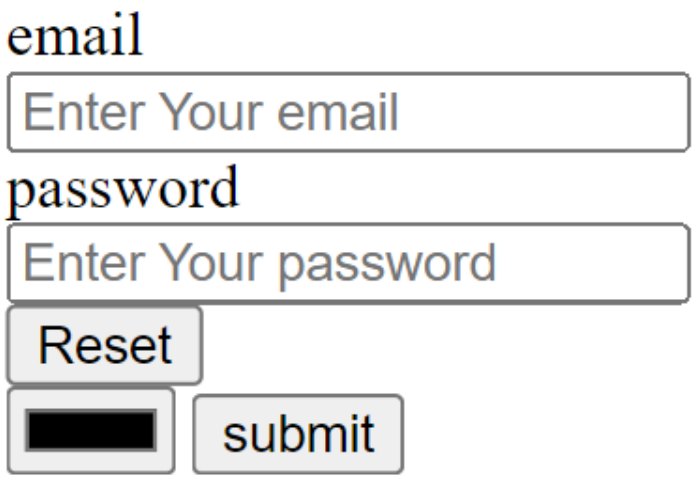
Reset

The **<input type="reset">** defines a reset button which resets all form values to its initial values.

Color

The **<input type="color">** defines a color picker.

```
<form action="send.php" method="post">
    <label>email</label><br>
    <input type="email" placeholder="Enter Your email" name="email"><br>
    <label>password</label><br>
    <input type="password" placeholder="Enter Your password" name="password"> <br>
    <input type="reset"> <br>
    <input type="color">
    <input type="submit" value="submit">
</form>
```



Range

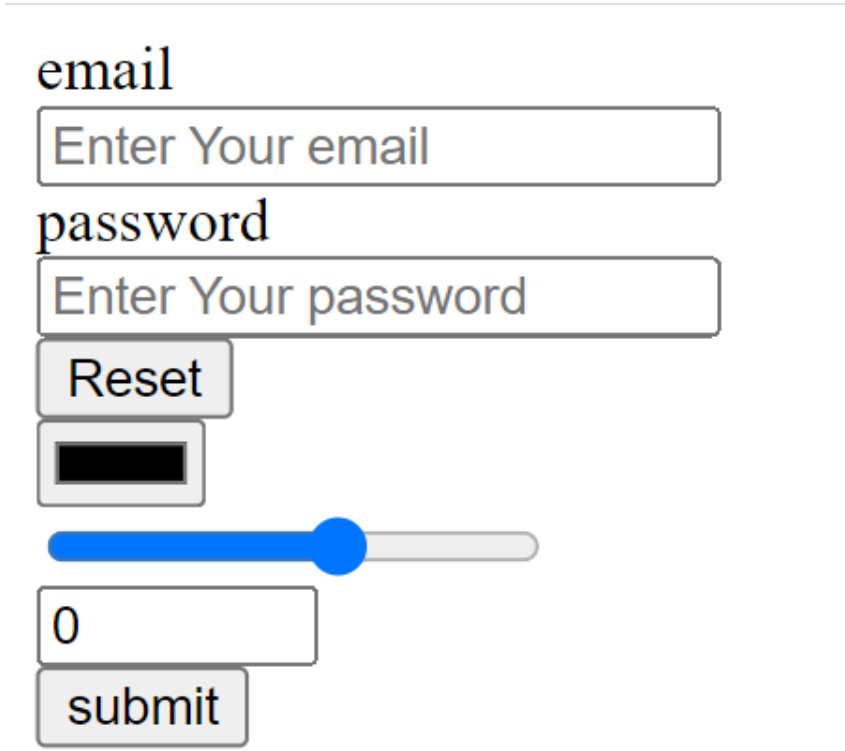
The **<input type="range">** defines a control for entering a number whose exact value is not important (like a slider control). Default range is 0 to 100. However, you can set restrictions on what numbers are accepted with the attributes below.

- max - specifies the maximum value allowed
- min - specifies the minimum value allowed
- step - specifies the legal number intervals
- value - Specifies the default value

Number

The <input type="number"> defines a field for entering a number.

```
<form action="send.php" method="post">
    <label>email</label><br>
    <input type="email" placeholder="Enter Your email" name="email"><br>
    <label>password</label><br>
    <input type="password" placeholder="Enter Your password" name="password"> <br>
    <input type="reset"> <br>
    <input type="color"> <br>
    <input type="range" min="0" max="100" step="20" name="range" value="60"> <br>
    <input type="number" min="0" max="100" step="2" name="count"><br>
    <input type="submit" value="submit">
</form>
```



ReadOnly, Disabled, Autofocus

The ReadOnly attribute specifies that an input field is read-only.
A read-only input field cannot be modified (however, a user can tab to it, highlight it, and copy the text from it).
The **readonly** attribute can be set to keep a user from changing the value until some other conditions have been met (like selecting a checkbox, etc.)

Disabled

```
<input readonly>
```

The **disabled** attribute specifies that the <input> element should be disabled.
A **disabled** input element is unusable and un-clickable.
The **disabled** attribute can be set to keep a user from using the <input> element until some other condition has been met (like selecting a checkbox, etc.)

Autofocus

```
<input disabled>
```

The **autofocus** attribute specifies that an <input> element should automatically get focus when the page loads.

```
<input autofocus>
```

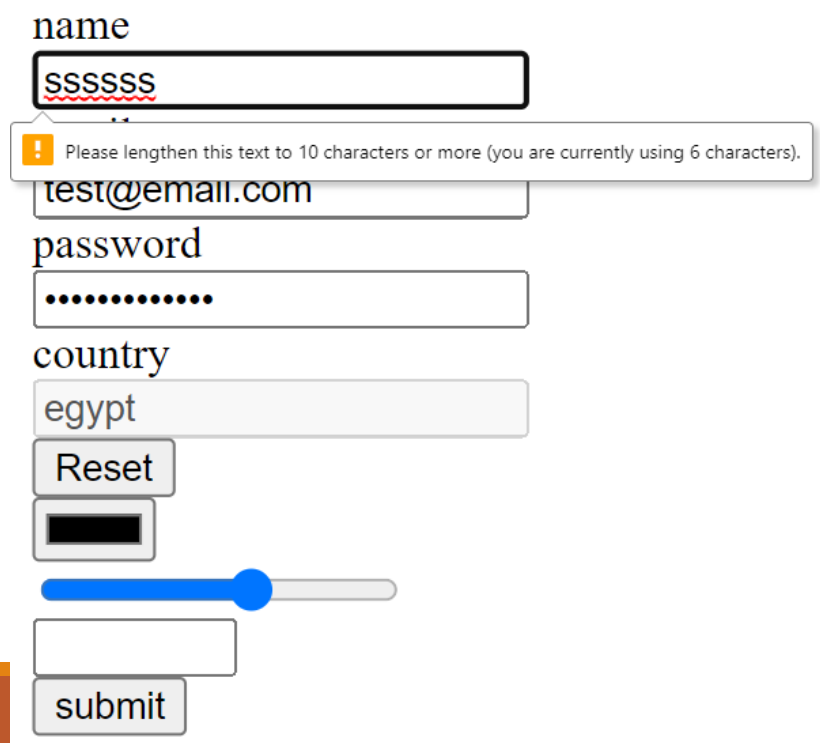
Minlenght & Maxlenght

The **minlength** attribute specifies the minimum number of characters required in an input field.

The **maxlength** attribute specifies the maximum number of characters allowed in the <input> element.

```
<input minlenght="10" maxlenght="100">
```

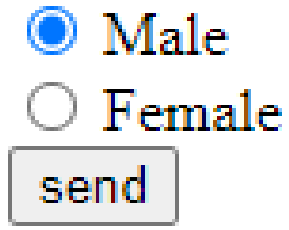
```html
<form action="send.php" method="post">
    <label>name</label><br>
    <input type="text" placeholder="Enter Your name" name="name" value="Enter Your name" autofocus minlength="10" maxlength="300"><br>
    <label>email</label><br>
    <input type="email" placeholder="Enter Your email" name="email" value="test@email.com" readonly><br>
    <label>password</label><br>
    <input type="password" placeholder="Enter Your password" name="password"> <br>
    <label>country</label><br>
    <input type="text" name="country" value="egypt" disabled><br>
    <input type="reset"> <br>
    <input type="color"> <br>
    <input type="range" min="0" max="100" step="20" name="range" value="60"> <br>
    <input type="number" min="0" max="100" step="2" name="count"><br>
    <input type="submit" value="submit">
</form>
```



Radio

The **<input type="radio">** defines a radio button.
Radio buttons are normally presented in radio groups (a collection of radio buttons describing a set of related options). Only one radio button in a group can be selected at the same time.
The radio group must have share the same name (the value of the name attribute) to be treated as a group. Once the radio group is created, selecting any radio button in that group automatically deselects any other selected radio button in the same group. You can have as many radio groups on a page as you want, as long as each group has its own name.

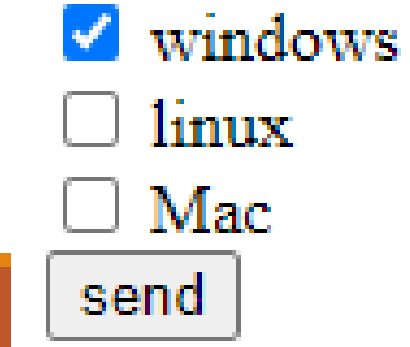
```
<form action="" method="post">
    <input type="radio" id="male" name="gender" value="male" checked>
    <label for="male">Male</label><br>
    <input type="radio" id="female" name="gender" value="female">
    <label for="female" >Female</label><br>
    <input type="submit" value="send">
</form>
```



Checkbox

The **<input type="checkbox">** defines a checkbox.
The checkbox is shown as a square box that is ticked (checked) when activated.
Checkboxes are used to let a user select one or more options of a limited number of choices

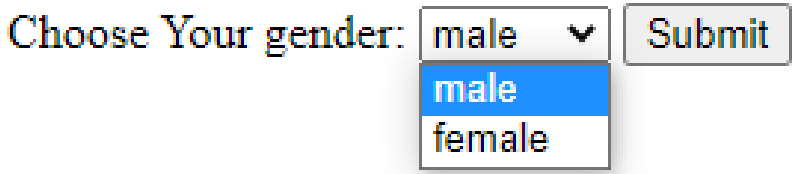
```
<form action="" method="post">
    <input type="checkbox" id="windows" name="os" value="windows" checked>
    <label for="windows">windows</label><br>
    <input type="checkbox" id="linux" name="os" value="linux">
    <label for="windows">linux</label><br>
    <input type="checkbox" id="Mac" name="os" value="Mac">
    <label for="Mac" >Mac</label><br>
    <input type="submit" value="send">
</form>
```

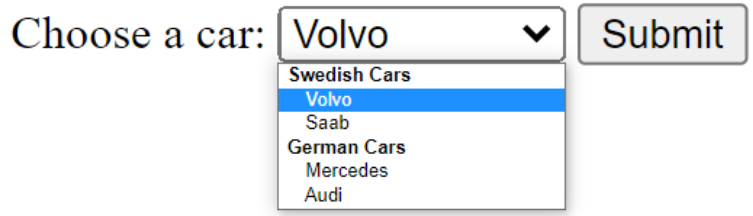


Select

The **<select>** element is used to create a drop-down list.
The **<select>** element is most often used in a form, to collect user input.
The **name** attribute is needed to reference the form data after the form is submitted (if you omit the name attribute, no data from the drop-down list will be submitted).
The **id** attribute is needed to associate the drop-down list with a label.

```
<form action="" method="get">
    <label for="gender">Choose Your gender:</label>
    <select name="gender" id="gender">
        <option value="male">male</option>
        <option value="female">female</option>
    </select>
    <input type="submit">
</form>
```





The **<optgroup>** tag is used to group related options in a <select> element (drop-down list).

The **multiple** attribute specifies that multiple options can be selected at once.
The **selected** attribute specifies that an option should be pre-selected when the page loads.

```
<form action="" method="">
    <label for="cars">Choose a car:</label>
    <select name="cars" id="cars">
        <optgroup label="Swedish Cars">
            <option value="volvo">Volvo</option>
            <option value="saab">Saab</option>
        </optgroup>
        <optgroup label="German Cars">
            <option value="mercedes">Mercedes</option>
            <option value="audi">Audi</option>
        </optgroup>
    </select>
    <input type="submit">
</form>
```

Select

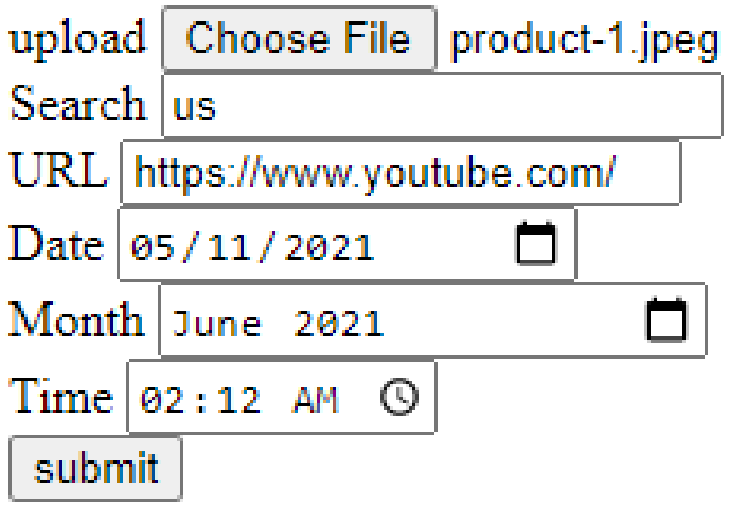
The **<textarea>** tag defines a multi-line text input control.
The **<textarea>** element is often used in a form, to collect user inputs like comments or reviews.
A text area can hold an unlimited number of characters, and the text renders in a fixed-width font (usually Courier).
The size of a text area is specified by the **<cols>** and **<rows>** attributes (or with CSS).
The **name** attribute is needed to reference the form data after the form is submitted (if you omit the name attribute, no data from the text area will be submitted).
The **id** attribute is needed to associate the text area with a label.

```
<form action="" method="get">
    <textarea id="message" name="message" rows="4" cols="50" placeholder="message"></textarea>
    <input type="submit">
</form>
```

File, Search, URL, Date, Time

The **<input type="file">** defines a file-select field and a "Browse" button for file uploads.
To define a file-select field that allows multiple files to be selected, add the multiple attribute.
The **<input type="search">** defines a text field for entering a search string.
The **<input type="url">** defines a field for entering a URL.
The **input** value is automatically validated before the form can be submitted.
The **<input type="date">** defines a date picker.
The resulting value includes the year, month, and day.
The **<input type="month">** defines a month and year control.
he **<time>** tag defines a specific time (or datetime).
The datetime attribute of this element is used translate the time into a machine-readable format so that browsers can offer to add date reminders through the user's calendar, and search engines can produce smarter search

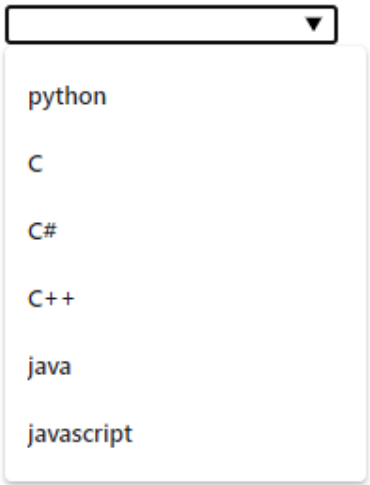
```
<form action="" method="get">
    <label >upload</label>
    <input type="file"> <br>
    <label >Search</label>
    <input type="search"> <br>
    <label >URL</label>
    <input type="url"> <br>
    <label >Date</label>
    <input type="date"> <br>
    <label >Month</label>
    <input type="month"> <br>
    <label >Time</label>
    <input type="time"> <br>
    <input type="submit" value="submit">
</form>
```



Data List

The **list** attribute refers to a **<datalist>** element that contains pre-defined options for an <input> element.
The **<datalist>** tag specifies a list of pre-defined options for an <input> element.
The **<datalist>** tag is used to provide an "autocomplete" feature for <input> elements. Users will see a drop-down list of pre-defined options as they input data.
The **<datalist>** element's id attribute must be equal to the <input> element's list attribute (this binds them together).

```
<form action="" method="get">
    <input list="programming" name="programming">
    <datalist id="programming">
        <option value="python">
        <option value="C">
        <option value="C#">
        <option value="C++">
        <option value="java">
        <option value="javascript">
    </datalist>
</form>
```



Novalidate

The **novalidate** attribute specifies that the form-data (input) should not be validated when submitted.

```
<form action="" method="" novalidate">
```

Target

The **target** attribute specifies a name or a keyword that indicates where to display the response that is received after submitting the form.
The **target** attribute defines a name of, or keyword for, a browsing context (e.g. tab, window, or inline frame).

```
<form action="" method="" target="_blank">
```

Q, BlockQuote, Wbr

The **<q>** tag defines a short quotation.
Browsers normally insert quotation marks around the quotation.

```
<p>WWF's goal is to:
<q>Build a future where people live in harmony with nature.</q>
We hope they succeed.</p>
```

The **<blockquote>** tag specifies a section that is quoted from another source.
Browsers usually indent **<blockquote>** elements (look at example below to see how to remove the indentation).

```
<blockquote>
For 50 years, WWF has been protecting the future of nature. The world's leading conservation organization,
WWF works in 100 countries and is supported by 1.2 million members in the United States and close to 5
million globally.
</blockquote>
```

The **<wbr>** (Word Break Opportunity) tag specifies where in a text it would be ok to add a line-break.

```
<p>To learn AJAX, you must be familiar with the XML<wbr>Http<wbr>Request Object.</p>
```

Bdi, Button

BDI stands for Bi-Directional Isolation.
The **<bdi>** tag isolates a part of text that might be formatted in a different direction from other text outside it.
This element is useful when embedding user-generated content with an unknown text direction.

```
<ul>
 <li>User <bdi>mohammed</bdi>: 80 points</li>
 <li>User <bdi>محمد</bdi>: 90 points</li>
</ul>
```

The **<button>** tag defines a clickable button.
Inside a **<button>** element you can put text (and tags like <i>, <b>, ,
, <img>, etc.).
That is not possible with a button created with the <input> element!
Tip: Always specify the type attribute for a <button> element, to tell browsers what type of button it is.

```
<button type="button">Click Me!</button>
```

iFrame, Pre, Code

The <iframe> tag specifies an inline frame.
An inline frame is used to embed another document within the current HTML document.

```
<iframe src="index.html">
</iframe>
```

```
<iframe width="560" height="315" src="https://www.youtube.com/embed/KzKy5Z-8K7k" >
</iframe>
```

The **<pre>** tag defines preformatted text.
Text in a **<pre>** element is displayed in a fixed-width font, and the text preserves both spaces and line breaks. The text will be displayed exactly as written in the HTML source code.

```
<pre>
Text in a pre element
is displayed in a fixed-width
font, and it preserves
both      spaces and
line breaks
</pre>
```

```
Text in a pre element
is displayed in a fixed-width
font, and it preserves
both      spaces and
line breaks
```

The **<code>** tag is used to define a piece of computer code. The content inside is displayed in the browser's default monospace font.

```
<html>
<head>
<style>
code {
  font-family: Consolas,"courier new";
  color: crimson;
  background-color: #f1f1f1;
  padding: 2px;
  font-size: 105%;
}
</style>
</head>
<body>

<p>The HTML <code>button</code> tag defines a clickable button.</p>
<p>The CSS <code>background-color</code> property defines the background color of an element.</p>

</body>
</html>
```

Accessibility

HTML Accessibility : Always write HTML code with accessibility in mind!
Provide the user a good way to navigate and interact with your site. Make your HTML code as **semantic** as possible.

Semantic HTML

Semantic HTML means using correct HTML elements for their correct purpose as much as possible. Semantic elements are elements with a meaning; if you need a button, use the **<button>** element (and not a ** ** element).

```
<button>Click Me</button> //Semantic
```

```
<div>Click Me</div> //non-Semantic
```

Semantic HTML gives context to screen readers, which read the contents of a page out loud.
With the button example in mind:

- buttons have more suitable styling by default
- a screen reader identifies it as a button
- focusable
- Clickable

A button is also accessible for people relying on keyboard-only navigation; it can be clickable with both mouse and keys, and it can be tabbed between (using the tab key on the keyboard).
Examples of non-semantic elements: ** ** and **** - Tells nothing about its content.
Examples of semantic elements: **<form>, <table>,** and **<article>** - Clearly defines its content.